

CLAIMS

1. A database access control method for performing access control on a database in response to a request from a user apparatus through cooperation between a database access control apparatus and a proxy process server apparatus, wherein:

the database access control apparatus sends an address of a usable proxy process server apparatus to the user apparatus in response to the request from the user apparatus;

the user apparatus connects to the proxy process server apparatus of the address to make a database access request;

the proxy process server apparatus makes a database process request to the database access control apparatus according to the database access request from the user apparatus;

the database access control apparatus performs a process on the database in response to the database process request from the proxy process server apparatus, and sends a process result to the proxy process sever apparatus; and

the proxy process server apparatus performs an additional process on the process result sent from the database access control apparatus, and sends an additional process result to the user apparatus.

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2. The database access control method as claimed in claim 1, wherein,

the database access control apparatus generates an access key based on a user ID of the user apparatus, stores the access key in a storing part of the database access control apparatus and sends the access key to the user apparatus;

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the user apparatus sends the access key to the proxy process server apparatus when making the database access request to the proxy process server apparatus;

5           the proxy process server apparatus sends the access key to the database access control apparatus when making the database process request to the database access control apparatus; and

          the database access control apparatus  
10       determines whether an access key the same as the access key received from the proxy process server apparatus exists in the storing part, and executes an access to data in the database within a limit permitted for the user ID corresponding to the  
15       access key only if the access key exists in the storing part.

3. The database access control method as claimed in claim 2, wherein,

20           the database access control apparatus determines whether the user apparatus is in a state of being connected to the proxy process server apparatus in addition to performing determination of the access key, and performs the access to the data  
25       in the database only if the user apparatus is in the state of being connected to the proxy process server apparatus.

4. A database access control apparatus for  
30       performing access control on a database in response to a request from a user apparatus through cooperation with a proxy process server apparatus, comprising:

          means for instructing the user apparatus  
35       to connect to the proxy process server apparatus by sending an address of a usable proxy process server apparatus to the user apparatus in response to a

request from the user apparatus; and

means for performing a process on the database in response to a database process request from the proxy process server apparatus, and sending  
5 a process result to the proxy process sever apparatus.

5. The database access control apparatus as claimed in claim 4, further comprising:

10 means for generating an access key based on a user ID of the user apparatus, storing the access key in a storing part of the database access control apparatus and sending the access key to the user apparatus when sending the address of the proxy  
15 process sever apparatus to the user apparatus;

means for receiving the access key and the database process request from the proxy process sever apparatus, and determining whether an access key the same as the access key received from the  
20 proxy process server apparatus exists in the storing part; and

means for executing an access to data in the database within a limit permitted for the user ID corresponding to the access key only if the  
25 access key exists in the storing part.

6. The database access control apparatus as claimed in claim 5, wherein,

the database access control apparatus  
30 determines whether the user apparatus is in a state of being connected to the proxy process server apparatus in addition to performing determination of the access key, and performs the access to the data in the database only if the user apparatus is in the  
35 state of being connected to the proxy process server apparatus.

7. A proxy process server apparatus for accessing a database via a database access control apparatus in response to a request from a user apparatus, comprising:

- 5           means for receiving an access key and a database access request from the user apparatus;
- means for sending a database process request and the access key to the database access control apparatus; and
- 10          means for receiving a process result of the database according to the database process request, performing an additional process on the process result, and sending an additional process result to the user apparatus.

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8. A program for causing a computer to execute a database access control process for performing access control on a database in response to a request from a user apparatus through cooperation with a proxy process server apparatus, the program causing the computer to execute:

- 20           a step for instructing the user apparatus to connect to the proxy process server apparatus by sending an address of a usable proxy process server apparatus to the user apparatus in response to a
- 25           request from the user apparatus; and
- a step for performing a process on the database in response to a database process request from the proxy process server apparatus, and sending
- 30           a process result to the proxy process sever apparatus.

9. The program as claimed in claim 8, the program causing the computer to execute:

- 35           a step for generating an access key based on a user ID of the user apparatus, storing the access key in a storing part of the database access

control apparatus and sending the access key to the user apparatus when sending the address of the proxy process sever apparatus to the user apparatus;

- 5       a step for receiving the access key and the database process request from the proxy process sever apparatus, and determining whether an access key the same as the access key received from the proxy process server apparatus exists in the storing part; and
- 10       a step for executing an access to data in the database within a limit permitted for the user ID corresponding to the access key only if the access key exists in the storing part.

- 15       10. The program as claimed in claim 9, the program causing the computer to execute:

- a step for determining whether the user apparatus is in a state of being connected to the proxy process server apparatus in addition to
- 20       performing determination of the access key, and performing the access to the data in the database only if the user apparatus is in the state of being connected to the proxy process server apparatus.

- 25       11. A computer readable recording medium recording the program as claimed in any one of claims 8-10.

12. A program for causing a computer to
- 30       perform a proxy process for accessing a database via a database access control apparatus in response to a request from a user apparatus, the program causing the computer to execute:

- a step for receiving an access key and a
- 35       database access request from the user apparatus;
- a step for sending a database process request and the access key to the database access

control apparatus; and

5 a step for receiving a process result of  
the database according to the database process  
request, performing an additional process on the  
process result, and sending an additional process  
result to the user apparatus.

13. A computer readable recording medium  
recording the program as claimed in claim 12.

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